

Application No. 09/702,505
Amendment "D" dated May 20, 2004
Reply to Office Action mailed March 1, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a system including a display device for displaying an image, the image having a plurality of sources, a method for compositing the image, the method comprising the acts of:

dividing the image into slices, each slice including at least one line;

dividing each line in each slice into at least one span, wherein each span has at least one associated source included in the plurality of sources and each line in each slice has the same at least one associated source;

for each span in each line, reading data directly from the associated source without reading the data as part of a composite image from a buffer using a double image buffer;

identifying portions of the image that are opaque and portions of the image that are translucent;

for each portion of the image that is translucent, reading, blending and displaying the data from the sources corresponding to the translucent portion;

for each portion of the image that is opaque, reading only from the sources that correspond to the opaque portion and that would be visible within the opaque portion during display of the image, and without reading data from any sources that would otherwise be obscured in the opaque portion during display of the image.

2. (Original) A method as defined in claim 1, wherein the act of reading data from the associated source further comprises the step of loading each associated source in memory.

3. (Original) A method as defined in claim 1, further comprising the act of creating a control structure having context information for the image.

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4. (Original) A method as defined in claim 3, wherein the control structure comprises:

an image header;
one or more slice headers associated with the image header;
one or more span headers associated with each slice header; and
one or more stream headers associated with each span header.

5. (Original) A method as defined in claim 3, wherein the act of reading data further comprises the act of reading contiguous pixel data for each span from each associated source.

6. (Previously Presented) A method as defined in claim 1, wherein the blending comprises blending data from more than two sources.

7. (Previously Presented) A method as defined in claim 1, wherein the act of blending the sources further comprises the acts of:

blending, in a first blend unit, each of two or more sources having a first color space;
blending, in a second blend unit, each of two or more sources having a second color space;
converting an output of the first blend unit to the second color space; and
blending the converted output of the first blend unit with a second output of the second blend unit to produce a blended output.

8. (Cancelled)

9. (Original) A method as defined in claim 1, wherein the act of reading data further comprises the act of filtering a span using vertically adjacent spans.

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10. (Currently Amended) In a system including a display device for displaying an image, each image being generated from one or more sources, each source having data, a method for compositing the image, the method comprising the acts of:

generating a control structure having context information describing the image, wherein the context information identifies the one or more sources;

reading ~~the image data of directly from~~ the one or more sources according to the context information and without first storing a composite image of the data in an ~~image~~ image buffer; and

displaying the read data on the display device as the data is read from the one or more sources.

11. (Original) A method as defined in claim 10, wherein the act of generating the control structure further comprises the act of dividing the image into one or more slices, each slice having one or more lines and each line having one or more spans, wherein at least one of the one or more sources is associated with each span and wherein each at least one source provides a data stream for the associated span.

12. (Previously Presented) A method as defined in claim 11, wherein the control structure comprises:

one or more slice headers defining one or more corresponding slices;

for each slice header, one or more span headers defining one or more corresponding spans; and

for each span header, one or more stream headers defining one or more corresponding data streams.

13. (Original) A method as defined in claim 10, further comprising the act of loading the one or more sources in memory of the system.

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14. (Previously Presented) A method as defined in claim 10, wherein the act of reading the data further comprises the act of blending the data, wherein the data is obtained from two or more data streams having a first color space and two or more data streams having a second color space.

15. (Previously Presented) A method as defined in claim 14, wherein the act of blending the data further comprises the acts of:

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cont
- blending each of two or more data streams having a first color space into a first output;
 - blending each of two or more data streams having a second color space into a second output;
 - converting the first output to the second color space; and
 - blending the first output with the second output.

16. (Original) A method as defined in claim 10, wherein the act of reading the data further comprises the act of filtering a span using vertically adjacent spans.

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17. (Currently Amended) In a system including a display device for displaying an image, a method for reducing the flicker of a portion of the image, the method comprising the acts of:

reading data from a source, wherein the data is the portion of the image that is subject to flickering, and wherein the data defines a single span of a plurality of spans that are included in a line;

reading previous data from the source, wherein the previous data corresponds to a previous span in a previous line, wherein the previous span is vertically adjacent to the span and comprises only one of a plurality of spans in the previous line;

reading next data from the source, wherein the next data corresponds to a next span in a next line and wherein the next span is vertically adjacent to the span and comprises only one of a plurality of spans in the next line; and

blending the previous span data, the span data subject to flickering, and the next span data, without blending the entire line with either the, entire previous line and the entire next line, and such that the flicker that would otherwise exist at the portion of the image corresponding to the span is reduced.

18. (Previously Presented) A method as defined in claim 17, wherein the span data subject to flicker comprises a first data stream, the previous span data comprises a second data stream, and the next span data comprises a third data stream.

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19. (Original) A method as defined in claim 18, the act of blending further comprises the acts of:

receiving the first data stream, second data stream, and third data stream at a blending module;

blending the first data stream, second data stream, and third data stream at a blending unit to produce an output data stream;

if the output data stream is in a color space that is different from the display device color space, converting the output data stream to the display device color space;
and

displaying the output data stream on the display device.

20. (Original) A method as defined in claim 17, wherein the display device displays images using interlaced fields, the method further comprising the act of displaying the image including the span included in the line, on the display device.

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21. (Previously Presented) In a system that composites images from one or more sources for display on a display device, a method for blending data streams from the one or more sources, the method comprising the acts of:

receiving data streams at a blending module, each of the data streams having a color space;

directing the data streams having the same color space to blending units of the blending module, each blending unit having an associated color space;

blending, by each blending unit, the data streams having the color space that is the same as the associated color space of the blending unit to produce outputs;

converting the outputs to a single color space; and

blending the outputs to produce an image data stream.

22. (Previously Presented) A method as defined in claim 21, wherein the single color space is one of RGB and YUV.

23. (Previously Presented) A method as defined in claim 21, further comprising the act of reading the image data directly from the one or more sources to the display device, and without reading the image data from a double image buffer.

24. (Original) A method as defined in claim 21, wherein the act of receiving the data streams further comprises the act of offsetting the data streams.

25. (Previously Presented) A method as defined in claim 24 wherein the act of offsetting the data streams further comprises the act of centering the data streams around zero by removing an offset that was added to the data stream during prior encoding of the data stream.

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26. (Previously Presented) A method as defined in claim 21, wherein the act of blending, by each of the blending units, further comprises the act of zeroing the data streams received at the blending units whose color space is different from the associated color space of the blending units, such that the data streams having the different color space are not blended by the blending units.

27. (Original) A method as defined in claim 21, wherein the act of directing the data streams further comprises the act of multiplying the data streams by an alpha factor.

28. (Previously Presented) A method as recited in claim 1, wherein each of the portions of the image comprise a different span, such that the opaque portion comprises a span and such that the translucent portion comprises a different span.
